

THE ENHANCEMENT OF RESEARCH AT CONCORDIA UNIVERSITY

25 March 1991 (revised 18 April, 1991)

as approved by Senate Research Committee, 15 April 1991

as approved by Senate Committee on Academic Planning and Priorities, 18 April 1991

as approved by Senate, 3 May 1991

RECEIVED

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SECRETARY OF SENATE

US-91-2-D11

FROM THE STEERING COMMITTEE

RE: STRATEGIC PLAN FOR THE ENHANCEMENT OF RESEARCH

CONSIDERING the resolution unanimously adopted by the Senate Research Committee on 15 April 1991; and

CONSIDERING the motion unanimously adopted by the Senate Academic Planning and Priorities Committee at its meeting of 18 April 1991;

BE IT RESOLVED:

THAT THE DOCUMENT ENTITLED - THE ENHANCEMENT OF RESEARCH AT CONCORDIA UNIVERSITY -, AS REVISED ON 18 APRIL 1991, (DOCUMENT US-91-2-D12), BE APPROVED BY SENATE.

26 April 1991

(as approved by Senate, 3 May 1991)

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1. Preface.

The purpose of this document is to propose a strategy for the enhancement of research at **Concordia University**. In this context research refers to all activities related to the development of new knowledge within the context and culture of each discipline.

While there is a clear and well-accepted relationship between research and graduate studies, the present document focusses exclusively on strategies designed to enhance research at **Concordia**. Complementary proposals dealing with graduate studies will be submitted for separate discussion.

2. The Mission of Concordia University: Research

Concordia University shares with other universities a mandate to create, critique, extend and disseminate knowledge about the world in which we live. This mission entails the pursuit of research in a wide range of disciplines and across disciplinary lines. Key to this mission is the University's involvement in graduate studies, which at the same time provides for the formation of the next generation of highly-educated individuals capable of extending further the frontiers of knowledge. Active research makes a powerful contribution to the shape and content of academic programmes and pedagogy at all levels, but particularly at the graduate level. It also constitutes a necessary ingredient for the establishment and maintenance of graduate programmes of the very highest quality. Thus the enhancement of research at **Concordia** contributes to the total academic mission of the University.

Concordia, therefore, has become and wishes to continue to develop, as a university where research represents an important and integral component of the academic activities of the professoriate. It should be prepared to compete on equal terms with other Canadian universities for available research funding, through the accepted processes of peer review. The University's brief to the Royal Society of Canada's Commission of Inquiry on University Research stated this objective and argued that research funding should be allocated on this basis, and not as the result of the establishment of two categories of universities, those that maintain a certain level of activity in research (or "research universities") and those that do not.

3. The Development of Research at Concordia.

The history of research as a part of the academic mission of **Concordia** is relatively young, although it predates the 1974 merger of **Sir George Williams University** and **Loyola College** to form **Concordia University**. Both founding institutions had long traditions of excellence in their undergraduate teaching programmes and of personal attention to the needs and aspirations of a growing and diverse student body. Some faculty members in both institutions carried on research activity on an individual basis. It was only in the mid-1960's, however, that graduate studies in conjunction with research began to develop at **Sir George Williams University**, and continued to develop through to the merger in 1974. Following the merger, development continued but was not based on a stated university-wide policy with respect to research, containing priorities related to development and resource allocation. As a result, until fairly recently, graduate studies and research at **Concordia** occupied a relatively marginal role in relation

to undergraduate education, as measured by enrolments, funding and faculty workload.

While considerable progress has been made in developing research since **Concordia** was founded, this has more often been achieved through individual researchers and teams of researchers, competing successfully for grants and for dissemination of their findings in refereed publications with colleagues in Québec, Canada and internationally. In a number of instances, these advances were promoted by decisions taken by departments or Faculties, working within the limiting constraints of a larger university-wide situation. The University's involvement has been limited essentially to the excellent assistance provided to researchers through the Research Office, and to such initiatives as the establishment of a University-Industry Liaison Office.

The University as a whole has not had a comprehensive policy for the development of research, with clear priorities and operational strategies addressing matters of budgets, hiring of faculty and material resources. One vital reason that such a policy has not been considered is that the University has heretofore not had the operating and capital funds available to give such a policy substance. Starting in the early 1980's, the University was subjected to compressions and "prélèvements" in its operating budget which left it with insufficient resources to meet its regular operating expenses on an annual basis. Furthermore, the growth of the University's accumulated deficit, combined with high interest rates, forced the University to devote a constantly increasing part of operating funds to servicing that debt. Without funds to back up key elements of a policy on research, it would have been unthinkable for

Concordia to put in place a meaningful and operational policy on research.

A first step toward remedying that situation was taken with the establishment of the Faculty Research Development Programme, implemented in 1990. The objective of this Programme is to broaden the base of research among the professoriate, particularly through assistance to researchers at the start of their careers or who wish to reorient their research activities. It is anticipated that by the academic year 1992-1993, about \$1.2 million annually will be devoted to this Programme.

Now that the funding situation of the University has improved, through an increase in both government grants and tuition fees, the time is more than appropriate to consider establishing a comprehensive university policy for the enhancement of research at **Concordia**. It is also urgent that this be done in light of certain discussions that are taking place, and trends that are emerging, with respect to the funding of university research in Québec and Canada.

4. The Current Status of Research at Concordia University.

The current situation with respect to research at **Concordia** may be summed up by saying that our progress has been constant but less rapid than in the case of other comparable universities. In a number of areas, our success in research has been very solid. Research Centres have been established, funding has been secured for these Centres, and we have been successful in obtaining grants in the Québec "Actions structurantes" and federal "Networks of Centres of Excellence" programmes.

With the exception of the current year where figures are incomplete, we have increased the amounts of money received in research grants and contracts (see **Table 1** and **Figures 1 to 6**). Other indicators of the growth of research at **Concordia University** parallel the increase in grant dollars. Publications, external collaboration, exhibitions and other scholarly works have steadily increased so that there are departments within all Faculties which have established themselves internationally as centres of excellence.

While these advances are noteworthy, they are not as significant across the University-wide context as those of other universities with similar, emerging research profiles.

In assessing **Concordia's** progress toward becoming a major research institution, it is useful as well that we make some internal comparisons. An examination of the research and scholarly activities of different academic units within **Concordia**, reveals that some disciplines have advanced more rapidly than others. This is manifest in a number of ways, including the levels of external research funding and the growth in refereed publications.

One disturbing note is that in some departments, the most recent list of refereed publications suggests that a significant number of faculty members show no evidence of participating in research and scholarship. Even more sobering is that in some departments which offer graduate programmes including doctoral studies, the level of research activity and the number of active researchers has fallen below the critical threshold needed to ensure

the academic excellence of their graduate offerings. While it may be unrealistic to expect that all members of the professoriate will devote major efforts to research, surely we may expect that departments offering advanced degrees will have a critical mass of productive scholars and researchers, who are able to fulfill the obligations of graduate supervision and teaching.

The evolution of involvement in research at **Concordia University** is influenced by developments in the support for research in Canada. Funding for the three federal research granting councils has levelled off in recent years, and a significant portion of the modest increases allotted to them has come in the form of matching grants for funds coming to the universities from the private sector. As can be seen in **Figures 6 to 12**, the constant dollars available to SSHRC, NSERC, MRC and FCAR have hardly evolved in the last few years.

This situation has had an impact on the success rate of applications to the granting councils from **Concordia**. Last year, for example, in the case of SSHRC, the overall success rate of applications for research grants tumbled over ten percent, from the high forties in the 1989-90 competition, to the mid-thirties in the 1990-91 competition. For **Concordia**, this has meant that in the current year, the dollars represented by grant applications approved by review committees on the basis of excellence, **but which were not funded by SSHRC for budgetary reasons**, exceeded the total monies actually awarded to **Concordia** researchers.

Given the current financial crisis that both the federal and Québec governments are facing, it is unlikely to expect that the budgets of the granting councils will

receive much by way of additional funding in the foreseeable future, despite the recent recommendation of the Royal Society of Canada that their budgets be doubled. In this context, one can expect a more fiercely competitive environment for research grants from those sources. If we are to compete for shrinking research dollars and achieve our stated objectives for the development of research, the University will have to devise a concerted and focussed strategy based not only on the excellence of our individual researchers and teams of researchers, but on the creation of an environment within the University which is conducive to promoting research in continued and systematic service to the total mission of the University.

It is also conceivable that in the next few years, new challenges will be mounted to the traditional manner in which research funding is made available in Canada. Such a trend is already visible in the federal programme of "Networks of Centres of Excellence" and the Québec programmes of "Actions structurantes" and "Fonds de développement technologique": emphasis on research in science and technology, preference for research groups with membership from different universities and encouragement to collaborative research with industry. Pushes toward a concentration of funding exclusively for a small group of highly performing researchers and for those universities that are defined as "research universities" are also evident in the recent recommendations of the Commission of Inquiry on University Research of the Royal Society of Canada and those of the National Advisory Board on Science and Technology. If these trends were to gain any momentum, they could have a detrimental effect on **Concordia's** capacity to develop its

research profile further. If such was needed, this is a further justification for moving expeditiously.

In summary, then, the external climate at the moment generates a sense of urgency for taking energetic steps to improve the University's research profile. Internally, the absence of a University policy, and the funding to make it feasible, have slowed the development of research at **Concordia**. As the funding situation improves and as opportunities for development increase within the limits of our available resources, the University is in a favourable position to adopt and implement a policy for enhancing research at **Concordia**.

5. Research at Concordia: The Future

Our own experience and that of other universities in developing research, as well as the current external climate and trends with regard to research support in Canada and Québec, all suggest a number of priorities and strategies for promoting, on a university-wide basis, the further enhancement of research at **Concordia University**.

5.1. Priorities

The most effective means of enhancing the quality and scope of our research effort at **Concordia University**, based upon our past successes in this area, is to build upon existing and emerging strengths. Most productive research is carried out by individuals and teams who are motivated, intellectually challenged and stimulated, and mentored by working in vibrant intellectual environments. Such environments form around a critical mass of professors, graduate students and post-doctoral fellows with an interest and active participation in research activ-

ities. It is logical, therefore, for the University to seek to reinforce such critical masses where they already exist, and to create them where the pre-conditions for their existence are readily identifiable. In addition, the University must continue to support active researchers throughout the University, since they will provide the basis for the future development of critical masses of researchers.

Hence, the University should consider strategies which would further the following ranked priorities:

- build upon our current strengths
- build upon emerging strengths
- facilitate the continued development of units aspiring to become units with strong research profiles

5.2 Strategies

The strategies required to implement the priorities just enunciated must be clear, effective and operational. They must make maximum use of the University's limited resources, focussing on those areas where there are real or potential strengths which can be quickly enhanced.

This does not mean that support by the University would cease for individual researchers who may be active but whose work occurs in an environment where the potential for the synergy described above is absent. Such individuals could be encouraged to join interdisciplinary teams with researchers from outside their academic units. Support for their individual research will continue to be made available from present University sources. They will no doubt continue to be successful in securing support from the various funding sources,

such as the granting councils, which make awards to individual researchers on the basis of merit and the source's priorities. The main focus for University funding for research in the years ahead, however, should be in furtherance of the University's objectives and priorities. Only in this way will **Concordia University** be able to make rapid progress in the research dimension of its academic mission.

Since the founding of the University, the most significant advances in research at **Concordia** have been concentrated in a few well-circumscribed fields. In each case, progress has been marked by major expansion of the units involved, or by a significant renewal of their professorial complement, i.e. by the arrival of a number of new colleagues with active research interests. Thus was formed in each of these units, a critical mass of persons with shared perceptions of their professional lives and career aspirations. In this climate, the career paths of new faculty assumed directions influenced by the mentoring of their senior colleagues. In addition, at the level of the sub-disciplines within many of these areas, newly-hired professors benefitted from the presence of two or perhaps three colleagues, permitting a synergistic relationship in which the productivity of the whole was greater than that of the parts taken in isolation.

This concentration of talent, similarly committed to research in relatively focussed areas, brought about in several instances the formation of research centres or relatively large, stable and well-financed groups in which both collaborative research and research by individuals took place. Centres or large teams often benefitted from the development of a supporting infra-

structure: shared support personnel, equipment, library resources and space. These resources, without which the centres would not be viable, also contributed to the enhancement of the academic life of the units in which these centres were based, creating a valuable multiplier effect. In addition, the enhanced ability to attract research awards gave members of centres an increased degree of flexibility in apportioning their time among their various professorial duties. Within such units one finds, therefore, a wider, more highly differentiated range of profiles with respect to the tasks of the professoriate. These units make it possible, through collective interaction, for individuals to modulate their participation in teaching and research, and to do so at opportune moments in their careers.

Such synergy may operate within a research centre, a department, a focus-linked group of professors within a department or in several academic units.

On the basis of the above, it is recommended that the University make a commitment to the following strategies as means to achieve its priorities for the enhancement of research:

1. Foster the further development and the establishment of sufficiently large collegial units in which research activity is reasonably focussed, and in which persons encourage, stimulate, and even collaborate in scholarly work;
2. Where appropriate, ensure the retention or addition within any such context of top-ranked researchers, who function as catalysts and

mentors to the collective group of scholars,
all working within a common area of research;

3. Encourage a flexibility in our conception of the role and task of the professoriate which enables persons for limited or more extended periods of their careers, to orient their efforts more to research, to encouraging these same activities among their colleagues, and to educating graduate students and post-doctoral fellows;
4. At opportune moments, direct significant resources to bolstering or establishing these collegial contexts, and to hiring accomplished researchers to function as catalysts in these units;
5. Provide sufficient infrastructural support for these units in the form of equipment, staff, library holdings and space;
6. Provide significant funds, by way of seed grants, to individual research projects which have the potential to bring together persons already at Concordia into a vibrant and productive collegial unit and to place these persons in a position to attract support from the increasingly competitive programmes of the federal and provincial research granting agencies;
7. Ensure that new faculty are hired with a view to integrating them into such units and their research activities;

8. Encourage established and promising individual researchers, who currently do not work in units offering the type of collegial stimulation described above, to come together to form inter-related groups which offer an appropriate environment for the enhancement of research;
9. Base decisions with regard to resource and budget allocation on comprehensive proposals prepared by the academic units, departments and research centres of the University that take into account the above strategies, within the context and culture of the specific discipline.

6. Implementation.

The priorities and strategies enumerated above, in addition to others which may be or have been adopted by the University, should guide the academic, institutional and budget planning processes at all levels of the University. First, these priorities and strategies should be taken into account as departments, faculties, the University Senate and the senior administration consider and adopt specific plans or projects. Second, these priorities and strategies must inform the making of decisions about resource allocation, in both the operating and capital budgets, and about how endowment and development monies raised through the University's capital campaigns and annual appeals shall be disbursed.

While this document is essentially concerned with a policy for the enhancement of research at **Concordia University**, it should be remembered that research activ-

ity represents only a part of the University's academic mission, and consequently only a part of the academic task of the professoriate. If the priorities and strategies spelled out in this document are to be achieved, it is vital that attention be paid as well to the appraisal of academic units and the review of academic programmes. Unit appraisal and curriculum review within units provide specific opportunities for reallocation of resources, duties and responsibilities in a manner which will facilitate both the enhanced delivery of academic programmes and the creation of an environment conducive to research.

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MRC OPERATING GRANTS-IN-AID:
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Figure 12.

FCAR OPERATING GRANTS MADE TO
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TABLE 1. GRANTS AND CONTRACTS BY FACULTY
AND DEPARTMENT AT CONCORDIA UNIVERSITY*

DEPARTMENT	1986-87	1987-88	1988-89	1989-90
ADMINISTRATION				
Administration		\$20,000	\$23,500	\$10,000
Library	\$110,945	\$16,796	\$5,289	\$87,251
Research Admin.	\$41,249	\$127,527	\$127,507	\$221,538
Subtotal	\$152,194	\$164,323	\$156,296	\$318,789
ARTS & SCIENCE				
Dean of Arts & Science	\$30,321	\$27,799	\$24,532	\$21,787
Applied Social Science	\$4,730	\$2,101	\$1,000	\$3,230
Biology(M)	\$393,005	\$547,366	\$875,210	\$983,045
Centre Interdisc. Stud.		\$500		
Centre de rech. en hist.	\$34,071		\$45,790	\$58,700
Chemistry(MD)	\$725,299	\$866,811	\$848,942	\$1,283,091
Classics	\$500		\$800	
Communication Studies(MD)	\$7,500	\$12,950	\$18,300	\$29,602
Economics(MD)	\$19,023	\$75,350	\$149,937	\$81,742
Education(MD)	\$220,006	\$138,290	\$158,865	\$210,430
English(M)	\$108,830	\$131,877	\$78,606	\$102,172
Etudes francaises	\$21,372	\$3,672	\$5,224	\$91,052
Exercise Science	\$13,548	\$8,200	\$45,570	\$18,927
Geography(M)	\$23,744	\$10,770	\$6,250	\$10,635
Geology	\$16,711	\$14,080	\$17,380	\$13,600
History(MD)	\$21,822	\$91,907	\$104,642	\$220,569
Inst. Coop. Education	\$8,493	\$9,134	\$11,374	
Journalism			\$9,502	\$5,500
Leisure Studies				\$5,000
Library Studies	\$1,000	\$2,564	\$2,607	\$3,467
Mathematics(M)	\$215,216	\$206,272	\$219,027	\$328,438
Modern Languages			\$2,000	\$3,723
Philosophy(M)	\$19,433	\$10,457	\$5,100	\$22,231
Physics(MD)	\$67,769	\$92,575	\$91,026	\$110,738
Political Science(M)	\$6,966	\$76,742	\$83,238	\$83,718
Psychology(MD)	\$1,815,667	\$1,608,600	\$2,210,424	\$2,340,572
Religion(MD)	\$61,430	\$50,174	\$36,215	\$43,056
SCPA	\$16,347	\$85	\$7,094	\$9,169
Inst. Simone de Beauvoir	\$2,750	\$56,627	\$52,329	\$44,797
Sociology & Anth.(M)	\$16,900	\$102,733	\$113,853	\$249,030
TESL(M)	\$110,875	\$69,798	\$41,005	\$40,482
Theological Studies	\$6,288		\$8,515	\$3,400
Subtotal	\$3,989,416	\$4,217,434	\$5,325,857	\$6,921,903
COMMERCE & ADMINISTRATION				
Dean of Commerce	\$31,311	\$38,400	\$7,738	\$2,861
Accountancy(M)	\$5,400	\$5,450	\$9,350	\$18,919
D.S.M.I.S.(MD)	\$140,843	\$201,152	\$139,970	\$131,148
Finance(MD)	\$20,395	\$66,504	\$66,552	\$109,063
Management(MD)	\$29,900	\$76,653	\$102,186	\$196,449
Marketing(MD)	\$149,140	\$157,091	\$82,302	\$100,217
Subtotal	\$376,989	\$545,250	\$408,098	\$558,657

(M) = dept. offers. on its own or conjointly, a Masters programme.

(MD) = dept. offers. on its own or conjointly, Masters and Doctoral Programmes.

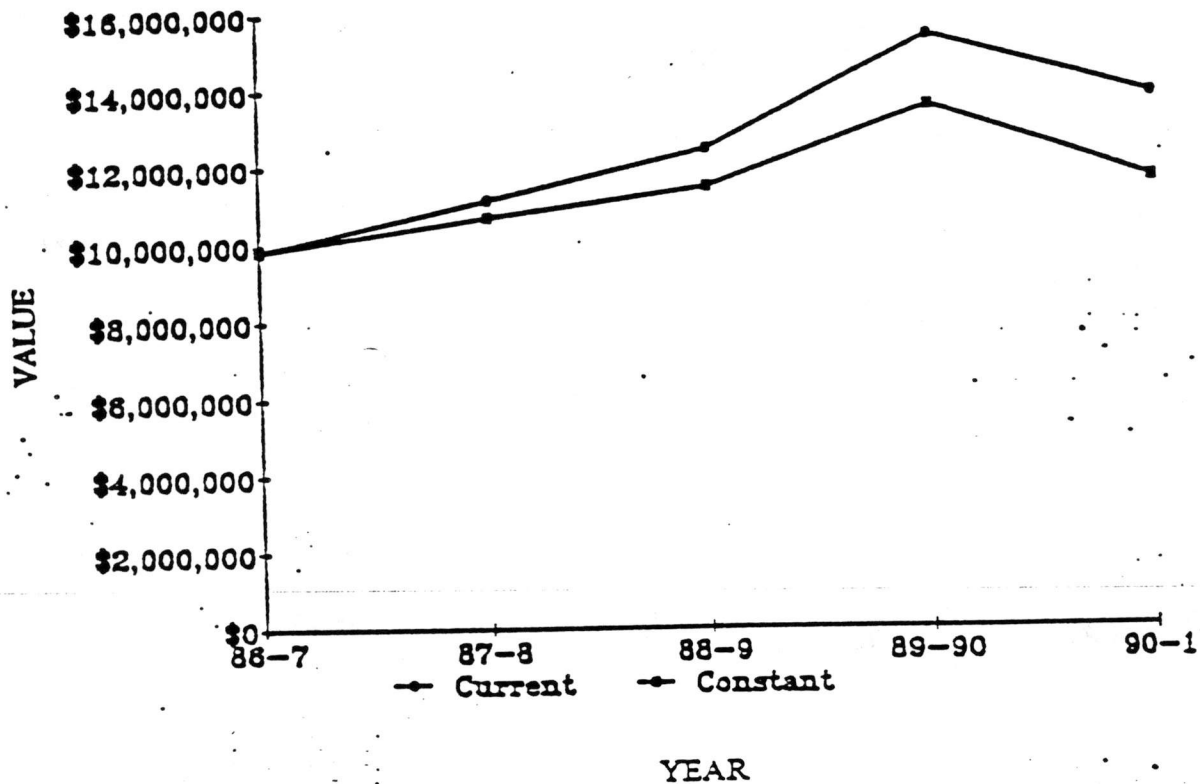
ENGINEERING & COMP. SCI.

Dean of Engineering	\$3,700	\$2,430	\$172,000	\$50,720
Ctr. Building Stud.(MD)	\$917,673	\$896,334	\$1,135,035	\$1,125,191
Civil Engineering(MD)	\$286,400	\$403,492	\$324,855	\$375,896
Computer Science(MD)	\$672,537	\$733,632	\$1,106,200	\$1,221,156
Elec. & Comp. Eng.(MD)	\$1,164,515	\$1,374,336	\$1,360,604	\$1,538,177
Mechanical Eng.(MD)	\$2,156,776	\$2,696,073	\$2,368,937	\$3,207,287
Subtotal	\$5,201,601	\$6,106,297	\$6,467,631	\$7,518,627

FINE ARTS

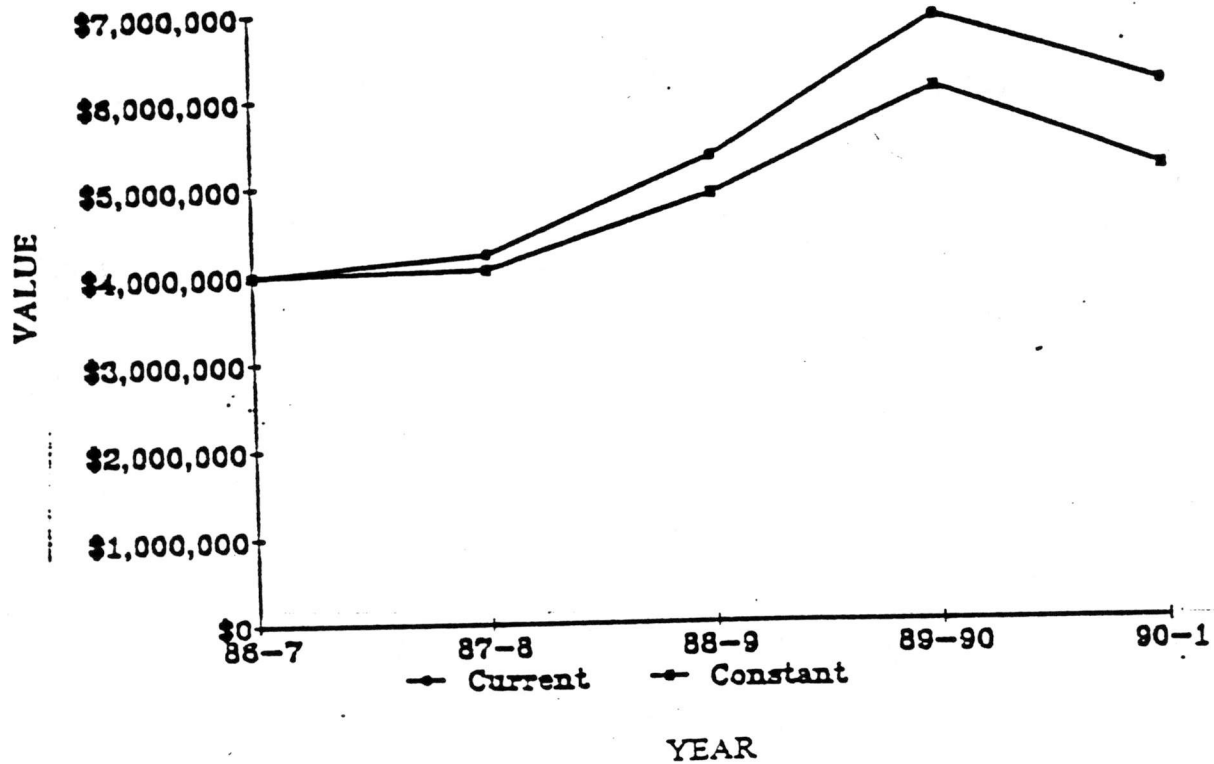
Dean of Fine Arts	\$2,100	\$11,570	\$2,524	\$5,709
Art Education(MD)	\$1,791	\$3,519	\$5,219	\$6,700
Art Gallery	\$47,941	\$10,575	\$39,515	\$22,570
Art History(M)	\$42,445	\$39,716	\$34,228	\$23,828
Cinema(M)	\$17,300	\$28,160	\$6,010	\$6,000
Dance	\$1,680	\$983	\$1,702	
Design(M)	\$363	\$315		\$400
Music	\$1,740	\$4,108	\$440	\$5,270
Painting & Drawing(M)	\$542	\$350	\$410	\$2,926
Printmaking & Photog.(M)	\$2,600	\$3,500	\$350	\$2,602
Sculp., Cer. & Fibres(M)	\$4,530	\$2,700	\$4,664	\$2,615
Theatre	\$2,462	\$5,613	\$2,800	\$13,211
Subtotal	\$125,494	\$111,109	\$97,862	\$91,831
TOTAL	\$9,845,694	\$11,144,413	\$12,455,744	\$15,409,607

FIGURE 1. TOTAL RESEARCH GRANTS AND CONTRACTS
HELD BY FACULTY AT CONCORDIA UNIVERSITY:
Current and Constant (1986-87) Dollars*



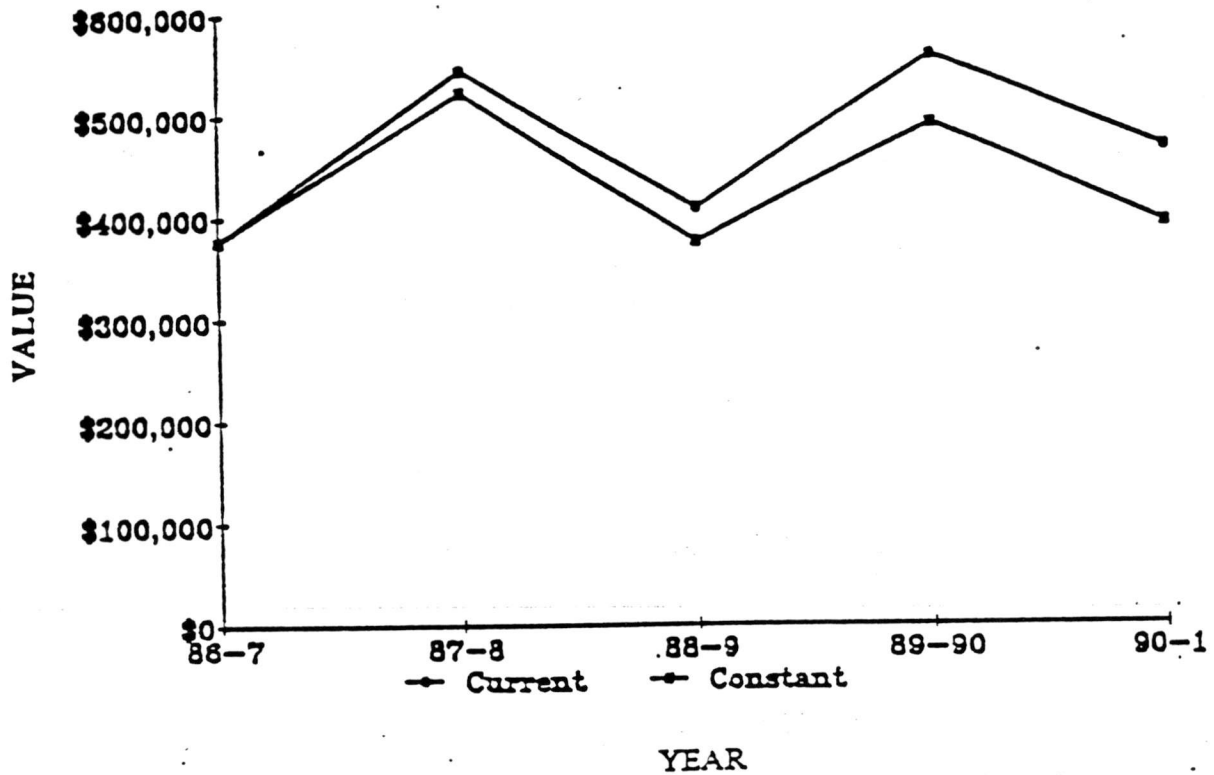
* Amounts for 1990-91 are projections based upon data available for the first six months of the academic year.

FIGURE 2. TOTAL RESEARCH GRANTS AND CONTRACTS
HELD BY MEMBERS OF THE FACULTY OF ARTS AND SCIENCE
AT CONCORDIA UNIVERSITY:
Current and Constant (1986-87) Dollars*



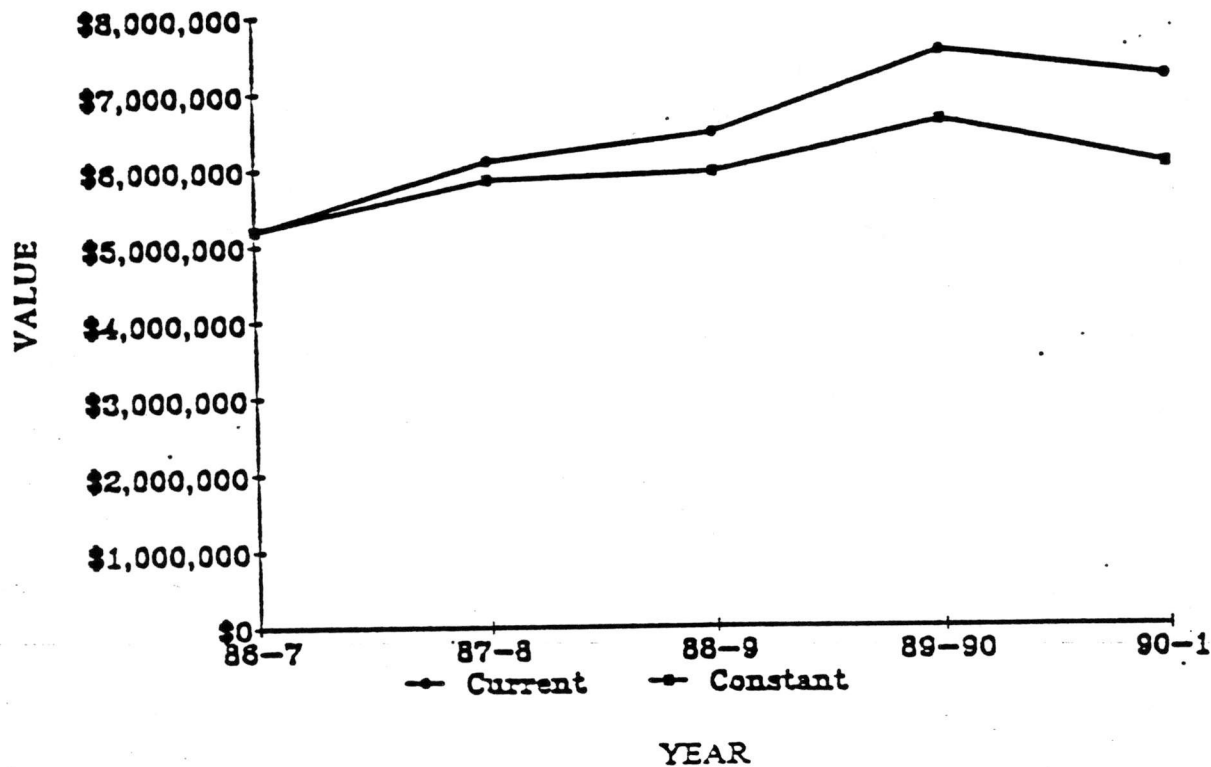
* Amounts for 1990-91 are projections based upon data available for the first six months of the academic year.

**FIGURE 3. TOTAL RESEARCH GRANTS AND CONTRACTS
HELD BY MEMBERS OF THE FACULTY OF COMMERCE
AND ADMINISTRATION AT CONCORDIA UNIVERSITY:
Current and Constant (1986-87) Dollars***



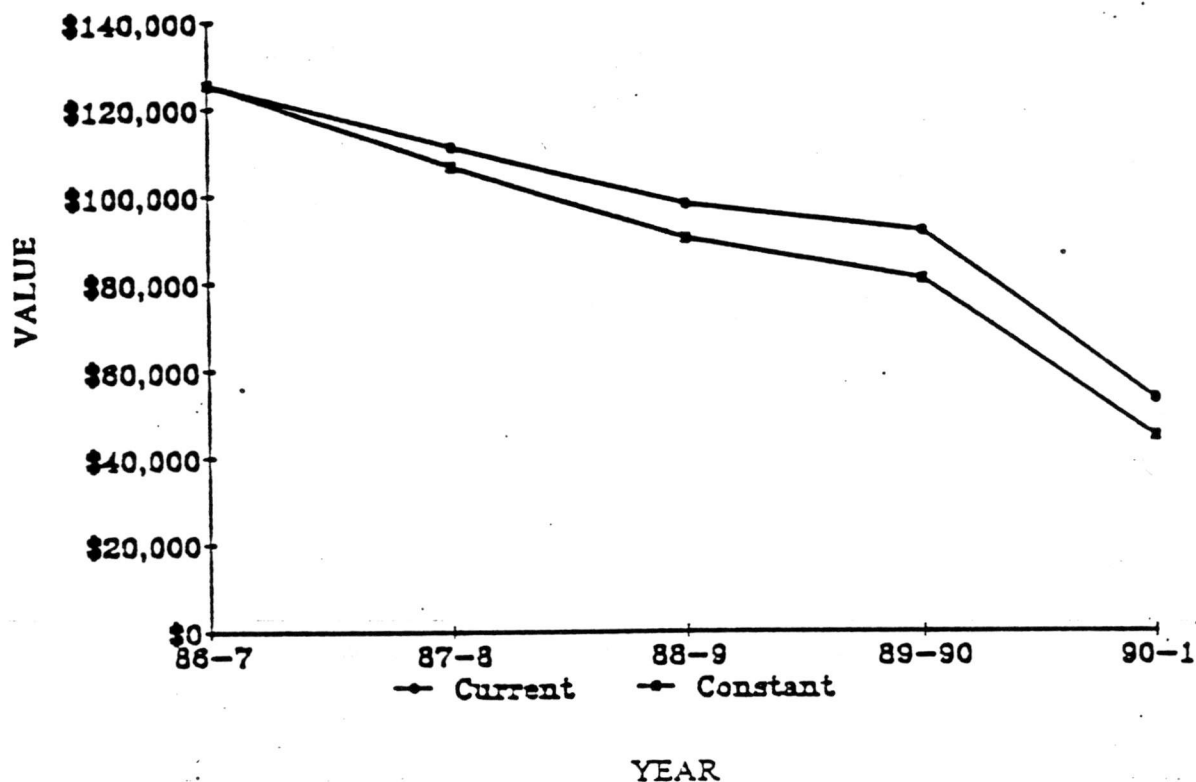
* Amounts for 1990-91 are projections based upon data available for the first six months of the academic year.

FIGURE 4. TOTAL RESEARCH GRANTS AND CONTRACTS
HELD BY MEMBERS OF THE FACULTY OF ENGINEERING
AND COMPUTER SCIENCE AT CONCORDIA UNIVERSITY:
Current and Constant (1986-87) Dollars*



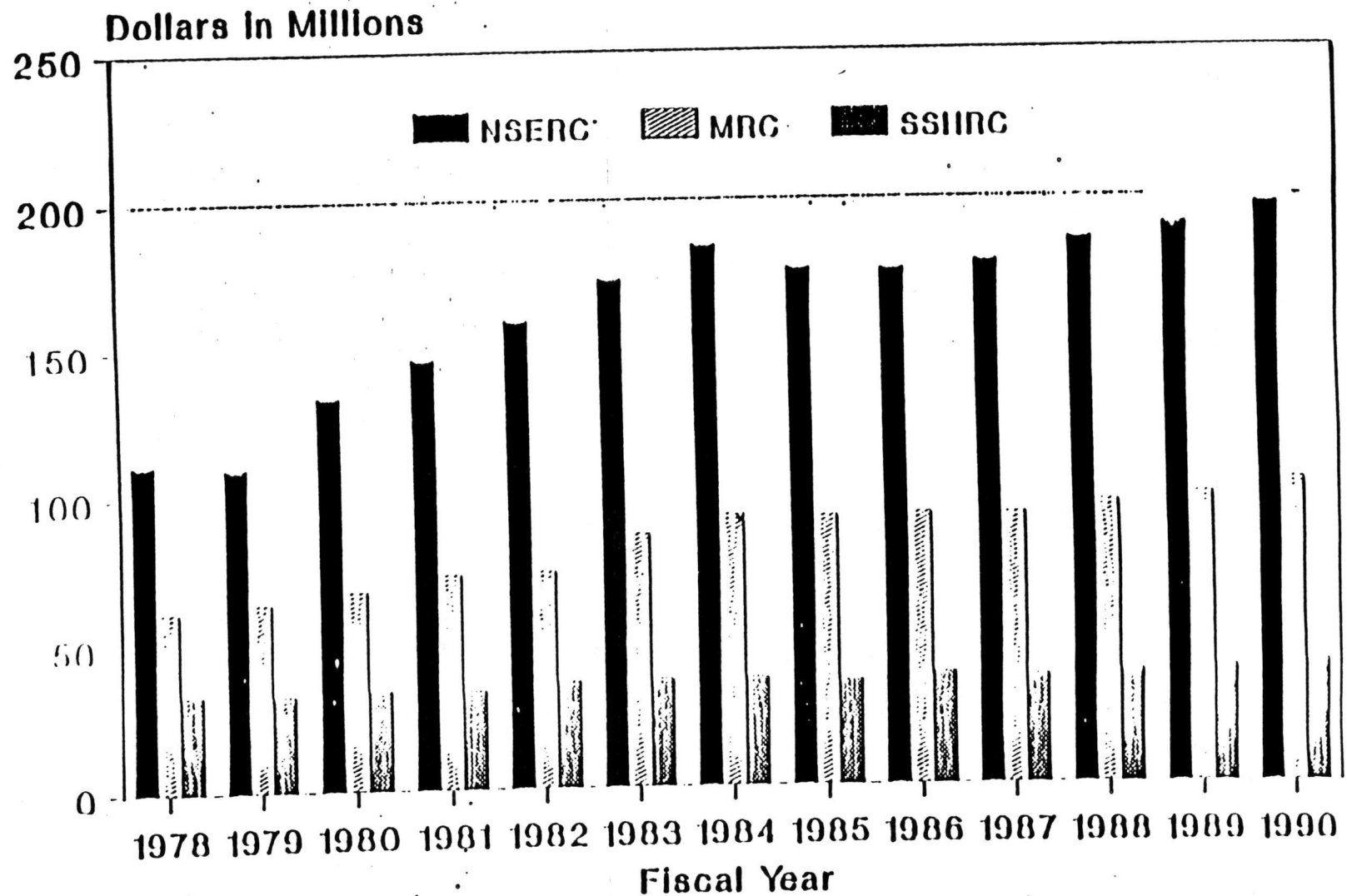
* Amounts for 1990-91 are projections based upon data available for the first six months of the academic year.

**FIGURE 5. TOTAL RESEARCH GRANTS AND CONTRACTS
HELD BY MEMBERS OF THE FACULTY OF FINE ARTS
AT CONCORDIA UNIVERSITY:
Current and Constant (1986-87) Dollars***



* Amounts for 1990-91 are projections based upon data available for the first six months of the academic year.

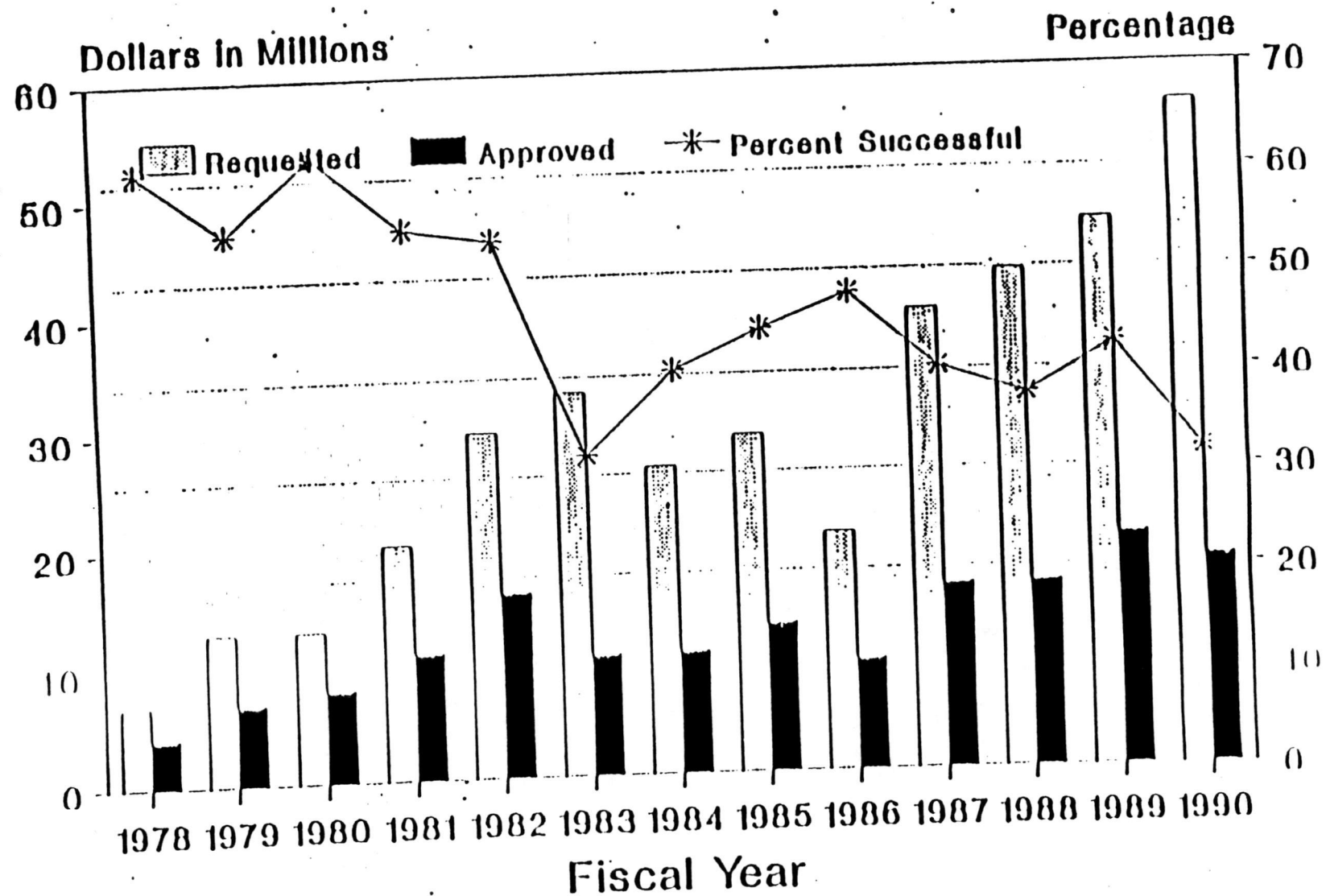
**FIGURE 6. FUNDING OF GRANTING COUNCILS
IN CONSTANT DOLLARS, 1978 BASE = 100***



source: Granting Councils

* From "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

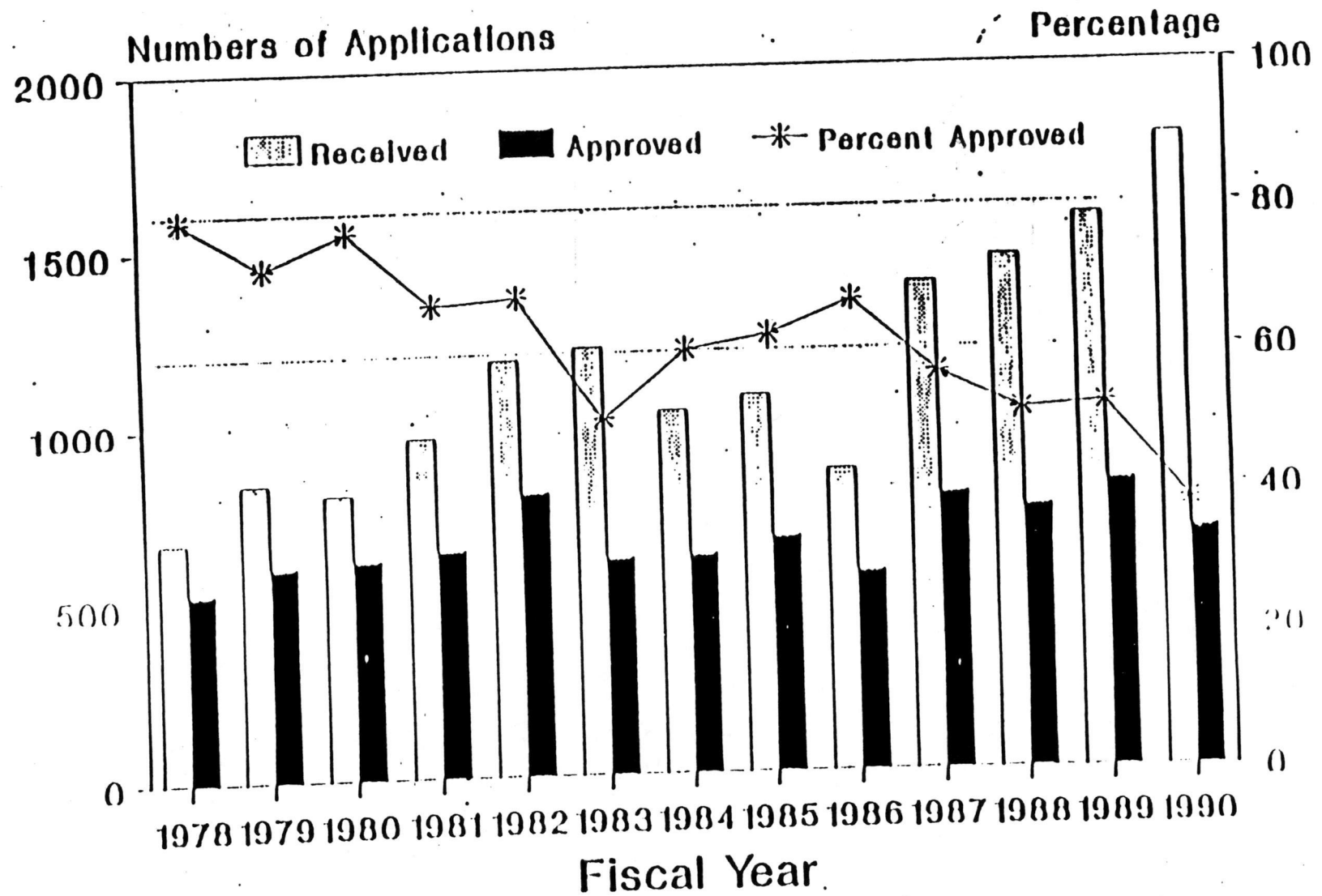
FIGURE 7. SSIIRC OPERATING GRANTS-IN-AID;
FUNDING REQUESTED AND APPROVED*



source: SSIIRC

* from "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

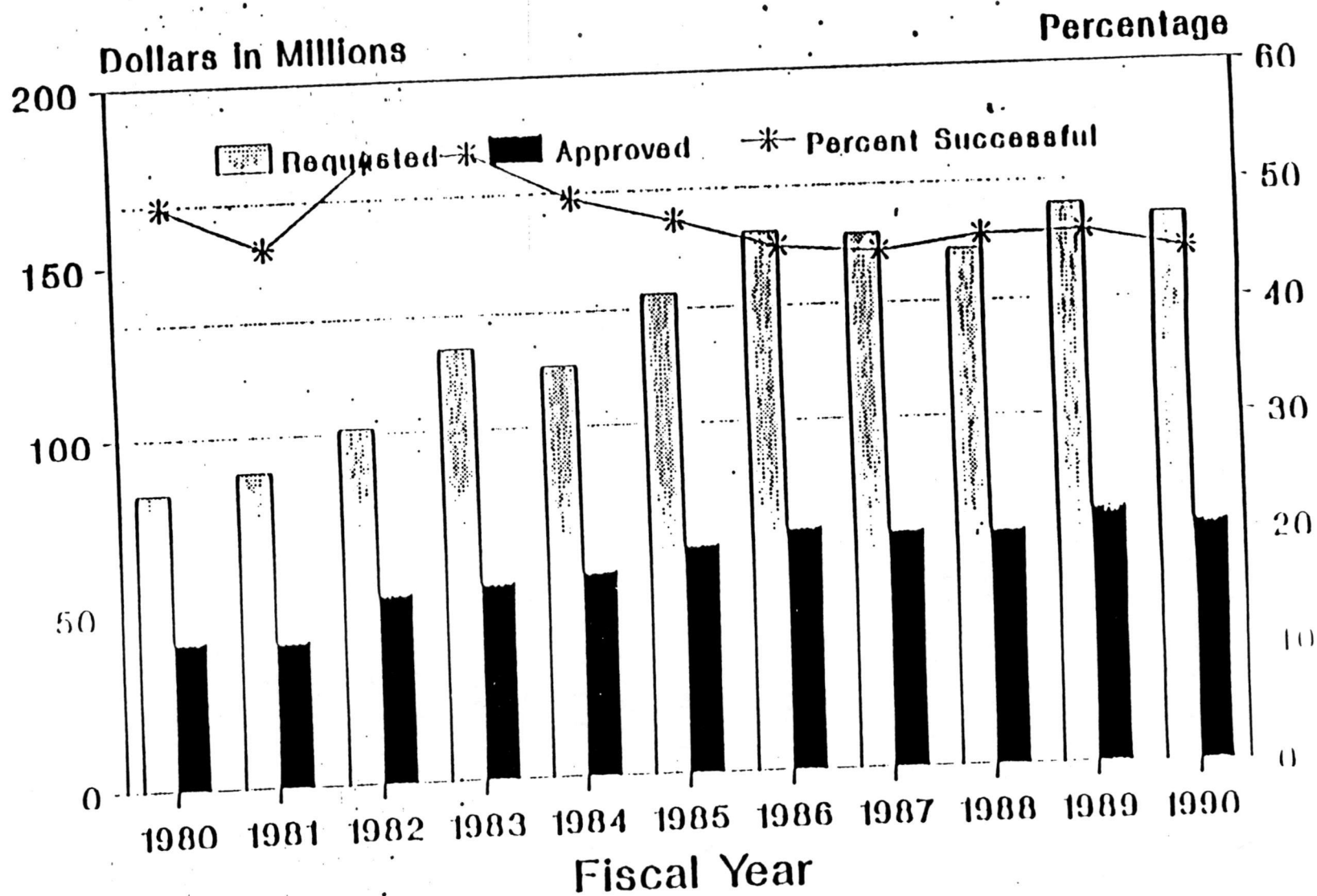
FIGURE 8. SSIIRC OPERATING GRANTS-IN-AID;
APPLICATIONS RECEIVED AND APPROVED*



source: SSIIRC

* from "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

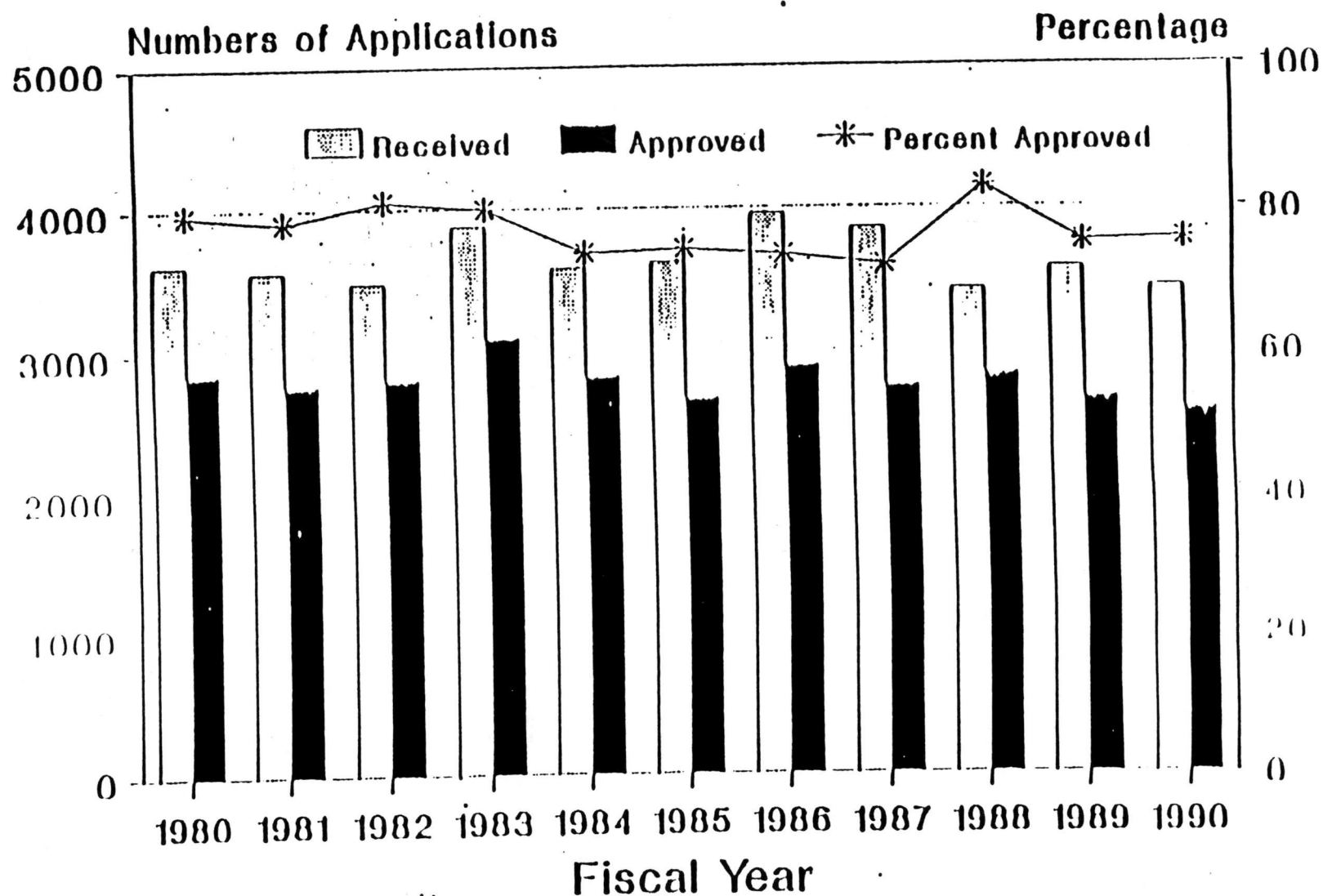
FIGURE 9. NSERC OPERATING GRANTS-IN-AID;
FUNDING REQUESTED AND APPROVED*



Source: NSERC

* From "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

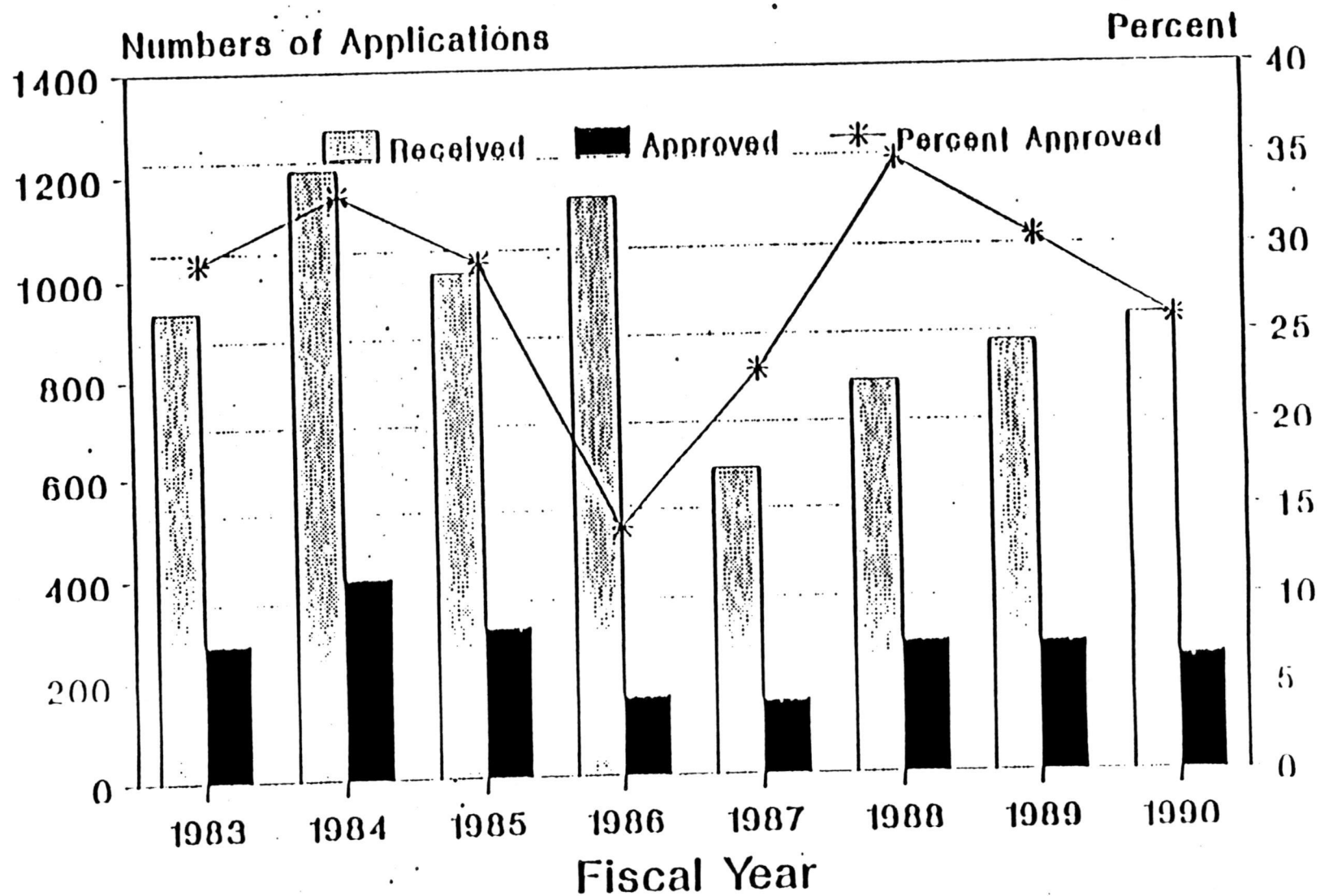
FIGURE 10. NSERC OPERATING GRANTS-IN-AID;
APPLICATIONS RECEIVED APPROVED*



source: NSERC

* from "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

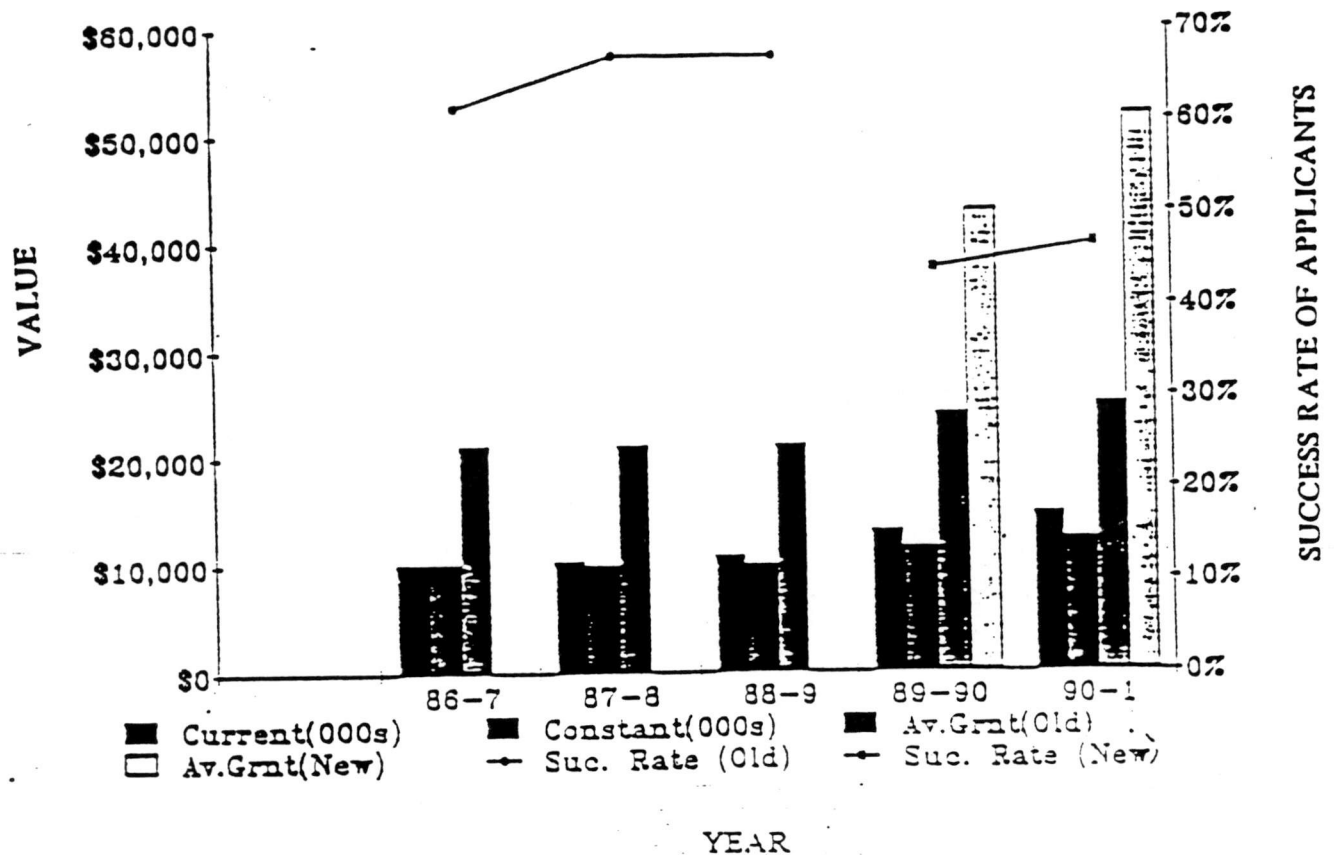
FIGURE 11. MRC OPERATING GRANTS-IN-AID;
APPLICATIONS RECEIVED AND APPROVED*



Source: MRC

* from "Realizing the Potential: A Strategy for University Research in Canada," The Royal Society of Canada, 11 December 1990.

FIGURE 12. FCAR OPERATING GRANTS
MADE TO EQUIPES IN QUEBEC UNIVERSITIES:
Current and Constant (1986-87) Dollars.
Average Value of Grant Made to a Single Team.
and Success Rate of Applicants*



The "old" programme has been phased out over a three year period which will end May 31, 1991; awards under the "new" programme began June 1, 1989.